(Breakthrough, Vol. VII, No. 4, Fall 1989)

CLASSROOM LEARNING STUDIES: PROTOCOLS, PROBLEMS, AND PROSPECTS

By Gregory D. Carroll, Ph.D.

Dr. Carroll is an associate professor of music at the University of North Carolina, an active pianist, composer, theorist, and conductor, with a distinguished career as a teacher-lecturer. His research interests include accelerated learning and enhanced human performance. He is a member of TMI's Board of Advisors.

Gregory Carroll began his presentation by gratefully acknowledging the pioneering work on Hemi-Sync® in the classroom done by JoDee Owens and the late Devon Edrington.

[See the following articles filed on this drive under: Individual Articles (1985-2013)/Topics/Learning and Memory/Education]

Breakthrough 1986-1 Hemi-Sync in the Classroom - Jo Dee Owens; *Archives - A Palliative for Wandering Attention - Devon Edrington* ; *Archives 1985 - Some Reports from Teachers Using Hemi-Sync]*

Dr. Carroll noted the differences he has faced in doing human subject research with college students and with students in public schools. He said there are relatively few problems with college students, "you just offer them a few bucks and you've got willing subjects." Public schools are another matter, and the barriers are many, he observed. The purpose of his presentation was to provide a general understanding of the protocols concerning public school research, the problems facing the research proposal, and the prospects for further research in the field using Hemi-Sync technology. He noted that his assessment is based on the single model of the Greensboro (North Carolina) Public Schools and that protocols may indeed vary from school to school and state to state.

The four basic groups that may be considering a Hemi-Sync research proposal are: 1) the Research Review Committee, 2) the administration, 3) the teachers, and 4) the parents. Each group can veto a project and each has its own particular concerns the researcher should consider. The Research Review Committee has a basic concern about: a) how much time will be involved in the project, and b) how many teachers and students are required. He noted that projects involving a shorter time span and fewer numbers of teachers and students are more readily approved. Keeping the likelihood of a diverse committee in mind, the content and style of the written proposal should be: a) not overly erudite, b) concise, direct, free of jargon, c) not saddled with overwhelming data, d) free of references to neurophysiological terminology or other terminology that might raise a "red flag." Simply referring to Hemi-Sync as "musical sounds" or "auditory stimulation" might be sufficient. He also stressed that timing is important

when submitting a proposal to a Research Review Committee—if there is any political distress or changes taking place in a school system, all but the most benign studies are likely to be rejected.

As to the administration, principals may accept or reject proposals based upon the number of ongoing studies, or upon experiences with previous studies. Dr. Carroll stated that assessing the receptivity of principals toward past research studies can help one determine target schools.

The most difficult group to predict in terms of acceptance or rejection is the teachers. A school with positive teacher attitudes is most likely to participate in research projects. Dr. Carroll pointed out the importance of the teachers' perceived value of the project in relation to the time and effort involved. He suggested assuring them that using any necessary equipment is easy, and also that some form of monetary compensation can be quite helpful.

Parents are the most fragile link in the chain because of the large number of approvers. According to Dr. Carroll, it only takes one parent's failure or reluctance to sign and return an advised consent form to lose an entire classroom from the study. He pointed out that in preparing a letter to parents, keep the idea of clear, simple content and style in mind. Adding to that, he advised to keep it brief, assure confidentiality of records, use the term "study" rather than "research," associate it with other "popular" educational issues (such as the question of background rock-and-roll music upon learning and retention), and strongly associate their child's participation with the potential that their child may experience better learning during the course of the study.

Speaking of future prospects, Dr. Carroll said that the broad examination and application of Hemi-Sync in the classroom is currently limited by: 1) the lack of sufficient "hard" neurological data as it relates to cognition and learning, 2) the absence of published research findings in "respected journals," and 3) very little research, if any, being conducted in the larger scientific community (external to TMI) involving the application of binaural auditory stimulation and learning. He said the entire area is virtually untapped and ripe for both general and specific exploration. Issues to be explored in the classroom include the question of the effect of Hemi-Sync on different academic subjects such as art and science. Dr. Carroll expressed the hope that with a little patience, a little time, and a lot of serious work, Hemi-Sync as a classroom teaching/learning tool will become commonplace.

On a final note, Dr. Carroll observed that business is getting increasingly concerned with and involved in education. The business community wants well-educated entry-level employees. He cited figures that indicate that, as of last year, American business is spending more on training its employees than the public sector is spending on education. He suggested that to

get Hemi-Sync into the business learning environment one must concentrate on selling the benefits versus the technology.